



Patent Application  
Attorney Docket No. D/A1442

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Thomas W. Smith et al.

Application No.: 10/035,736

Filed: November 7, 2001

Examiner: C. Shosho

Art Unit: 1714

Confirmation No.: 5048

Title: **INK COMPOSITIONS CONTAINING  
QUARTERNARY-SUBSTITUTED LIGHTFASTNESS AGENTS**

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Sir:

CERTIFICATE OF MAILING

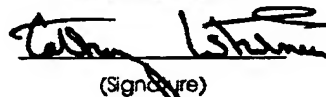
I hereby certify that this  
correspondence is being deposited  
with the United States Postal Service  
with sufficient postage as first class  
mail in an envelope addressed to:  
Mail Stop: Petition, Commissioner for  
Patents, P.O. Box 1450, Alexandria,  
VA 22313-1450, on

December 22, 2004

(Date of deposit)

Cathy Whitney

(Name of applicant, assignee,  
or Registered Representative)

  
(Signature)

December 22, 2004

Date of Signature

01/04/2005 HAL111 00000018 240025 10035736

01 FC:1453 1500.00 DA

PETITION TO REVIVE UNDER 37 C.F.R. §1.137(b)

This Petition is filed in response to the Notice of  
Abandonment mailed November 26, 2004 in the above identified  
application. A copy of this Notice of Abandonment is attached hereto

Application No. 10/035,736

as Exhibit A. Applicants hereby petition for revival of U.S. Patent Application 10/035,736.

1. Applicants received an Office Action mailed April 19, 2004 for the instant application. A copy of this Office Action is attached hereto as Exhibit B.

2. Applicants' Attorney Judith L. Byorick prepared a response to this Office Action. This response is enclosed herewith as required by 37 C.F.R. §1.137(b)(1). A second copy of this response is attached hereto as Exhibit C.

3. On July 12, 2004, Xerox Administrative Assistant Jean A. Hough faxed for Xerox Attorney Judith L. Byorick a copy of this response to facsimile number 703-872-9806. As can be seen from page 5 of Exhibit B, this number is an incorrect rendition or key entry error of "(t)he fax phone number for the organization where this application or proceeding is assigned". But for this key entry error, this response would have been received by the U.S.P.T.O.

4. Upon sending the aforesaid response, Xerox Administrative Assistant Jean A. Hough received a confirmation report indicating that the transmission had been successfully sent to facsimile number 703-872-9806. A copy of this confirmation report is attached hereto as Exhibit D.

5. On November 12, 2004, Examiner Callie E. Shosho contacted Xerox Attorney Judith L. Byorick to determine whether Xerox intended to abandon the instant patent application by failure to submit a response to the Office Action dated April 12, 2004. During this telephone conversation, Xerox Attorney Judith L. Byorick stated that to the best of her knowledge a response had been sent and that there had definitely been no intention to abandon the application.

6. Upon further investigation, Xerox Attorney Judith L. Byorick discovered that the response sent July 12, 2004 had been sent to the incorrect facsimile number indicated on the confirmation report (Exhibit D) instead of to the correct facsimile number.

7. Applicants hereby state that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 C.F.R. §1.137(b) was unintentional.

8. Applicants further include herewith a terminal disclaimer as required by 37 C.F.R. §1.137(b)(4) and 37 C.F.R. §1.137(d).

9. In view of the above facts, Applicants hereby petition for revival of U.S. Patent Application 10/035,736.

10. Authorization is hereby granted to charge Deposit Account No. 24-0025 the fee set forth in 37 C.F.R. §1.17(m) for this petition of \$1,500. Authorization is also hereby granted to charge Deposit

Application No. 10/035,736

Account No. 24-0025 any other necessary fees associated with this petition.

Respectfully submitted,

  
\_\_\_\_\_  
Judith L. Byorick  
Attorney for Applicant(s)  
Registration No. 32,606  
(585) 423-4564

JLB/cw

Xerox Corporation  
Xerox Square 20A  
Rochester, New York 14644



# UNITED STATES PATENT AND TRADEMARK OFFICE

JLB.

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,736	11/07/2001	Thomas W. Smith	D/A1442	5048

7590 11/26/2004

Patent Documentation Center  
Xerox Corporation  
Xerox Sq. 20th Floor  
100 Clinton Ave. S.  
Rochester, NY 14644

EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 11/26/2004



Please find below and/or attached an Office communication concerning this application or proceeding.

*Not. of Abandonment / Pet. to Reissue or COS to  
Abandon due: 12-26-04*

DOCKETED-DLK

RECEIVED

NOV 29 2004

PATENT DEPARTMENT

# Notice of Abandonment



Application No.	Applicant(s)	
10/035,738	SMITH ET AL.	
Examiner	Art Unit	
Callie E. Shosho	1714	

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 19 April 2004.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below.

*Callie E. Shosho*  
 Callie E. Shosho  
 Primary Examiner  
 Art Unit: 1714  
 04/18/04

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

# Interview Summary



Application No.

10/035,736

Applicant(s)

SMITH ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

All participants (applicant, applicant's representative, PTO personnel):

(1) Callie E. Shosho.

(3) \_\_\_\_\_

(2) Judith Byorick.

(4) \_\_\_\_\_

Date of Interview: 15 November 2004.

Type: a) ☒ Telephonic b) ☐ Video Conference

c) ☐ Personal (copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: \_\_\_\_\_

Identification of prior art discussed: \_\_\_\_\_

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Ms. Byorick confirmed that the application was abandoned. Ms. Byorick noted that an amendment was intended to be filed but that such amendment was inadvertently faxed to an incorrect fax number and that a petition would be filed to revive the application.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Callie Shosho  
Examiner's signature, if required



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,736	11/07/2001	Thomas W. Smith	D/A1442	5048

7590 04/19/2004  
Patent Documentation Center  
Xerox Corporation  
Xerox Sq. 20th Floor  
100 Clinton Ave. S.  
Rochester, NY 14644

RECEIVED

APR 22 2004

PATENT DEPARTMENT

EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 04/19/2004

*And due: 7-19-04*

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED - PAS



# Office Action Summary

Application No.

10/035,736

Applicant(s)

SMITH ET AL

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30, 34-39 and 43-44 is/are rejected.
- 7) ☐ Claim(s) 31-33 and 40-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. In the office action mailed 2/25/04, claims 28, 31-34, 37, and 40-43 were indicated as objected to as being dependent upon a rejected base claim but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 28, 34, and 37 are each drawn to quaternary ammonium substituted UV absorbing compound which is a hydroxybenzophenone quaternary compound. These claims were indicated as objected to given that there was no disclosure or suggestion in the "closest" prior art, i.e. Gundlach et al. (U.S. 6,054,505), Vieira et al. (U.S. 5,096,781), and WO 97/20000, of these specific quaternary ammonium substituted UV absorbing compounds.

However, upon reconsideration of Vieira et al., it is noted that the reference does in fact disclose quaternary ammonium substituted UV absorbing compound which is a hydroxybenzophenone quaternary compound. Such disclosure necessitates the new grounds of rejection as set forth in paragraph 5 below.

In light of the above, the after-final amendment filed 3/26/04 has not been entered so that applicants can respond to these new grounds of rejection as set forth below.

Thus, the finality of the office action mailed 2/25/04 has been withdrawn and the following action is non-final. It is noted that in addition to the new grounds of rejection, the rejections of record as set forth in the office action mailed 2/25/04 are also restated below.

**Claim Rejections - 35 USC § 103**

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-27, 30, 36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach et al. (U.S. 6,054,505) in view of Vieira et al. (U.S. 5,096,781).

The rejection is adequately set forth in paragraph 3 of the office action mailed 8/26/03 and is incorporated here by reference.

4. Claims 1-26, 29, 35, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach et al. (U.S. 6,054,505) in view of WO 97/20000.

The rejection is adequately set forth in paragraph 4 of the office action mailed 8/26/03 and is incorporated here by reference.

5. Claims 1-7, 9-17, 19-26, 28, 34, 37, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach et al. (U.S. 6,054,505) in view of Vieira et al. (U.S. 5,096,781).

Gundlach et al. disclose ink comprising water, 0.1-40% nonpolymeric salt, 1-5% anionic dye, and 0.01-50% polyquaternary amine such as polydiallyl dimethyl ammonium, polyquaternized polyvinylamine, polyquaternized polyallylamine, epichlorohydrin/amine, cationic amido amine, and copolymer of vinyl pyrrolidone and vinyl imidazolium salt. In one embodiment, the anionic dye complexes with the polyquaternary amine. It is further disclosed that the above ink is preferably printed using thermal ink jet printer but Gundlach et al. also

Art Unit: 1714

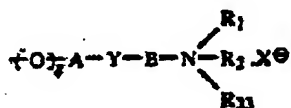
disclose the use of other conventionally known ink jet printing methods including piezoelectric ink jet process (col.1, lines 8-17 and 41-43 and 44-47, col.2, line 46-col.3, line 3, col.6, lines 62-65, col.7, lines 25-27 and 40-55, col.13, lines 15-17 and 31-32, col.15, lines 42-45, col.19, lines 51-58, col.22, lines 35-38, and col.23, lines 18-24).

The difference between Gundlach et al. and the present claimed invention is the requirement in the claims of quaternary ammonium substituted UV absorbing compound.

Vieira et al. disclose the use of 0.01-20% light stabilizer of the formula:



where U is radical of hydroxybenzophenone and SOL is:



where g is 0, A is alkylene group, Y is direct bond or C(O)NR<sup>1</sup> where R<sup>1</sup> is hydrogen, B is alkylene group, and R<sub>1</sub>, R<sub>2</sub>, and R<sub>33</sub> are each alkoxy group, alkyl group, or aryl group. It is disclosed that the light stabilizer is used in ink jet inks. The motivation for using such light stabilizer is to protect ink against damage caused by light, oxygen, and heat (col.1, lines 5-8, col.2, lines 11-15, col.17, lines 42-45, col.17, line 53-col.19, line 50, col.20, lines 8-9, col.22, lines 61-63, and col.23, lines 1-3).

In light of the motivation for using light stabilizer disclosed by Vieira et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such light stabilizer in the ink of Gundlach et al. in order to produce ink with excellent resistance to light, oxygen, and heat, and thereby arrive at the claimed invention.

**Allowable Subject Matter**

6. Claims 31-33 and 40-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

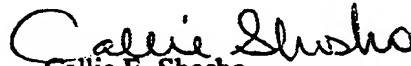
Claims 31-33 and 40-42 would be allowable if re-written in independent form as described above given that there is no disclosure or suggestion in the "closest" prior art, i.e. Gundlach et al. (U.S. 6,054,505), Vieira et al (U.S. 5,096,781), or WO 97/20000, of specific quaternary ammonium substituted UV absorbing compound as required in these claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
4/14/04

Confirmation Report - Memory Send

Time : 2004-Jul-12 14:45  
Tel line : +5854235240  
Name : XEROX

Job number : 854  
Date : Jul-12 14:41  
To : 8-17038729806-91870  
Document pages : 026  
Start time : Jul-12 14:41  
End time : Jul-12 14:45  
Pages sent : 026  
Status : OK

Job number : 854

\*\*\* SEND SUCCESSFUL \*\*\*

THE DOCUMENT COMPANY  
**XEROX**

F A C S I M I L E Urgent for Delivery

To

Callie Shosbo  
United States Patent & Trademark Office  
Art Unit: 1714  
Confirmation No.: 5048

Phone  
571.272.1123  
Fax  
703.872.9306  
Page(s)  
25

Date  
7/12/2004  
Time

From

Judith L. Byorick  
Xerox Corporation  
OGC/Patent Department  
XRX2-20A  
Rochester NY 14644  
Phone: 585.423.5764  
Fax: 585.423.5240

Message

Re: Application No. 10/035,736  
Attorney Docket No. D/A1442

Response to Office Action mailed 4/19/2004.

Please Note: This facsimile message may contain information which is privileged, confidential, and exempt from disclosure under applicable laws and is intended only for the use of the individual named above and others who have been specifically authorized to receive it. If you are not the intended recipient, you are hereby notified that any dissemination, distribution or copying of the communication is strictly prohibited. If you have received this communication in error, please notify immediately by telephone the intended recipient, Dianne Ayers (585)423.6998 or Jeanne A. Kotas (585)423.4625. Xerox will reimburse you for your telephone expense.

00700 (1/0/0000)





Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Patent Application  
Attorney Docket No.  
D/A1442

**TERMINAL DISCLAIMER ACCOMPANYING PETITION TO REVIVE**

In re Application of: **Thomas W. Smith et al.**

Application No.: **10/035,736**

Group Art Unit: **1714**

Confirmation No.: **5048**

Filed: **November 7, 2001**

Examiner: **Callie Shosho**

For: **INK COMPOSITIONS CONTAINING QUATERNARY-SUBSTITUTED  
LIGHTFASTNESS AGENTS**

The owner, Xerox Corporation, of 100% percent interest in the instant application hereby disclaims a terminal part of the term of any patent granted thereon equivalent to the lesser of:

(i) The period of abandonment of the application; or

(ii) The period extending beyond twenty years from the date on which the application for the patent was filed in the United States. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

☒ The undersigned is an attorney or agent of record.

Signature

Judith L. Byorick

Typed or printed name

32,606

Registration No.

585-423-4564

Telephone No.

12/22/2004

Date

☒ Please charge \$130 to Deposit Account No. 24-0025 for the terminal disclaimer fee under 37 CFR 1.20(d). (An additional copy of this paper is enclosed.)

Customer No.: 25453

01/04/2005 HALI11 00000017 240025 10035736

31 FC:1814 130.00 DA